

CLAIMS

What is claimed is:

1 1. A method of providing operating system drivers during an operating system installation on
2 a computer system, the method comprising:
3 storing the operating system drivers on a read only memory (ROM) within the computer
4 system; and
5 copying at least one of the operating system drivers from a virtual disk drive of the
6 computer system during the operating system installation.

7 2. The method of providing operating system drivers as defined in claim 1 wherein copying at
8 least one of the operating system drivers from a virtual disk drive further comprises:
9 invoking basic input output system (BIOS) routines; and
10 showing the operating system drivers residing on the ROM as files stored on the virtual
11 disk drive by the BIOS routines.

12 3. The method of providing operating system drivers as defined in claim 2 further comprising:
13 requesting disk services to the virtual disk drive by;
14 invoking interrupt 13h BIOS routines directed to the virtual disk drive; and
15 returning a file name for at least one of the operating system drivers by the interrupt 13h
16 BIOS routines as if the operating system drivers resided on the virtual disk drive.

1 4. The method of providing operating system drivers as defined in claim 1 wherein storing the
2 operating system drivers on the ROM within the computer system further comprises storing the
3 operating system drivers on the ROM along with a basic input output system (BIOS).

1 5. The method of providing operating system drivers as defined in claim 1 wherein storing
2 operating system drivers on the ROM within the computer further comprises:

3 storing on the ROM a first set of operating system drivers operable with a first operating
4 system; and

5 storing on the ROM a second set of operating system drivers operable with a second
6 operating system.

1 6. The method of providing operating system drivers as defined in claim 5 further comprising
2 having only operating system drivers operable with the operating system to be installed available
3 for copying from the virtual disk drive.

1 7. The method of providing operating system drivers as defined in claim 6 wherein having
2 only the operating system drivers operable with the operating system to be installed available for
3 copying from the virtual disk drive further comprises showing only the operating system drivers
4 operable with the operating system to be installed as files stored on the virtual disk drive by the
5 BIOS routines.

1 8. The method of providing operating system drivers as defined in claim 7 wherein showing
2 the operating system drivers as files stored on the virtual disk drive further comprises:

requesting disk services to a disk drive name that does not physically reside in the computer system by;
invoking interrupt 13h BIOS routines directed to the disk drive name that does not physically reside in the computer system;
returning a file name for operable operating system drivers by the interrupt 13h BIOS services as if the operating system drivers resided on the disk drive name that does not physically reside in the computer system.

9. A computer system comprising:

a CPU;
a main memory array;
a first bus bridge coupling the CPU and main memory array;
a primary expansion bus;
a secondary expansion bus;
a second bus bridge coupling the primary and secondary expansion bus;
a read only memory (ROM) array coupled to the secondary expansion bus, wherein the ROM array stores operating system drivers; and

wherein the computer system is adapted to make the operating system drivers appear to reside on a virtual floppy drive for copying during loading of an operating system for the computer system.

10. The computer system as defined in claim 9 wherein the ROM array also stores basic input output system (BIOS) firmware.

1 11. The computer system as defined in claim 10 wherein the BIOS firmware, when invoked for
2 disk services, is adapted to make the operating system drivers appear to reside on the virtual floppy
3 drive.

1 12. The computer system as defined in claim 9 further comprising:
2 said ROM array stores a first set of operating system drivers for a first operating system;
3 said ROM array stores a second set of operating system drivers for a second operating
4 system; and

5 wherein the computer system is adapted to make only one of the first and second set of
6 operating system drivers available for copying from the virtual floppy drive during loading of the
7 operating system for the computer system.

1 13. A method of loading an operating system on a computer, the method comprising:
2 storing operating system drivers on a read only memory (ROM);
3 informing a basic input output system (BIOS) of an operating system type to be installed;
4 making available during the loading of the operating system the operating system drivers
5 stored on the ROM appropriate for the operating system type to be installed;
6 loading the operating system; and
7 copying at the appropriate time during the loading of the operating system at least one of the
8 operating system drivers from a virtual floppy drive.

1 14. The method of loading an operating system on a computer as defined in claim 13 wherein
2 storing operating system drivers on the ROM further comprises:

3 storing a first set of operating system drivers operable with a first operating system; and

4 storing a second set of operating system drivers operable with a second operating system.

1 15. The method of loading an operating system on a computer as defined in claim 13 wherein
2 informing the BIOS of the operating system type to be installed further comprises:

3 selecting the operating system type to be installed on a BIOS setup screen; and

4 setting an environment variable in a non-volatile random access memory (RAM) based on
5 the selecting step that indicates the operating system type to be installed.

1 16. The method of loading an operating system on a computer as defined in claim 15 wherein
2 making available the operating system drivers stored on the ROM further comprises:

3 using BIOS programs to access the operating system drivers stored on the ROM;

4 referring, by the BIOS programs, to the environment variable in non-volatile RAM; and

5 making one of the first and second set of operating system drivers available on the virtual
6 floppy drive by the BIOS program based on a state of the environment variable in non-volatile
7 RAM.

1 17. A read only memory (ROM) device comprising:

2 a basic input output system (BIOS) program;

3 a set of hardware drivers; and

4 wherein the BIOS program is adapted to, when executed by a microprocessor, make the set
5 of hardware drivers available for copying during installation of an operating system by providing
6 the hardware drivers on a virtual disk drive.

1 18. The ROM device as defined in claim 17 wherein the set of hardware drivers further
2 comprises:

3 a first set of hardware drivers for use with a first type operating system;
4 a second set of hardware drivers for use with a second type operating system; and
5 wherein the BIOS program is adapted to make only the first set of hardware drivers
6 available during installation of the first type operating system, and wherein the BIOS program is
7 adapted to make only the second set of hardware drivers available during installation of the second
8 type operating system.

1 19. A method of providing operating system drivers during an operating system installation on
2 a computer system, the method comprising:

3 storing a first set of operating system drivers operable with a first operating system in a
4 read only memory (ROM) of the computer system;
5 storing a second set of operating system drivers operable with a second operating system in
6 the ROM; and
7 copying at least one of the operating system drivers from a virtual disk drive of the
8 computer system during the operating system installation.

1 20. The method of providing operating system drivers as defined in claim 19 further
2 comprising:

3 selecting on a basic input output system (BIOS) setup screen one of the first and second
4 sets of operating systems, a selected system, to be installed on the computer system; and
5 having only operating system drivers operable with selected system, selected drivers,
6 available for copying from the virtual drive.

1 21. The method of providing operating system drivers as defined in claim 20 further
2 comprising:

3 requesting disk services to a disk drive name that does not physically reside in the
4 computer system by;

5 invoking interrupt 13h BIOS services directed to the disk drive name that does not
6 physically reside in the computer system; and

7 returning file names for the selected drivers by the interrupt 13h BIOS services as if the
8 selected drivers resided on the disk drive name that does not physically reside in the computer
9 system.

1 22. A computer system comprising:

2 a CPU;

3 a main memory array;

4 a first bus bridge coupling the CPU and main memory array;

5 a primary expansion bus;

6 a secondary expansion bus;

7 a second bus bridge coupling the primary and secondary expansion bus;
8 a read only memory (ROM) coupled to the secondary expansion bus, wherein the ROM
9 stores basic input output system (BIOS) programs; and
10 wherein the BIOS programs are adapted to show a virtual floppy drive whose contents
11 reside in the virtual address space of the computer system.

1 23. The computer system as defined in claim 22 wherein the BIOS programs of the ROM are
2 further adapted to show the virtual floppy drive whose contents reside in the random access
3 memory (RAM) area of the virtual address space.

1 24. The computer system as defined in claim 22 wherein the BIOS programs of the ROM are
2 further adapted to show the virtual floppy drive whose contents reside in the ROM area of the
3 virtual address space.

1 25. The computer system as defined in claim 24 further comprising:
2 said ROM contains operating system drivers necessary to interface an operating system of
3 the computer system with hardware of the computer system; and
4 wherein the BIOS programs are adapted to show the operating system drivers on the ROM
5 as the contents of the virtual floppy drive.

1 26. The computer system as defined in claim 25 further comprising:
2 said ROM contains a first set of operating system drivers for use with a first operating
3 system;

4 said ROM also contains a second set of operating system drivers for use with a second
5 operating system; and

6 wherein the BIOS programs are adapted to show as contents of the virtual floppy drive the
7 first set of operating system drivers if the first operating system is to be installed on the computer
8 system, and wherein the BIOS programs are further adapted to show as contents of the virtual
9 floppy drive the second set of operating system drivers if the second operating system is to be
10 installed on the computer system.

1 27. A method of providing operating system drivers during an operating system installation on
2 a computer system, the method comprising:

3 storing a first floppy image having a first set of operating system drivers operable with a
4 first operating system, the first floppy image stored in a read only memory (ROM) of the computer
5 system;

6 storing a second floppy image having a second set of operating system drivers operable
7 with a second operating system, the second floppy image stored in the ROM; and

8 providing one of the first and second floppy images as a virtual floppy drive during the
9 operating system installation.

1 28. The method of providing operating system drivers as defined in claim 27 further
2 comprising:

3 selecting on a basic input output system (BIOS) setup screen one of the first and second
4 sets of operating systems, a selected system, to be installed on the computer system; and

5 having only the floppy image having operating system drivers operable with selected
6 system, a selected floppy image, available on the virtual floppy drive.

1 29. The method of providing operating system drivers as defined in claim 28 wherein
2 providing one of the first and second floppy images as a virtual floppy drive during the operating
3 system installation further comprising:

4 requesting disk services to a disk drive name that does not physically reside in the
5 computer system by;

6 invoking interrupt 13h BIOS services directed to the disk drive name that does not
7 physically reside in the computer system; and

8 returning file names in the selected floppy image by the interrupt 13h BIOS services as if
9 the selected floppy image resided on the disk drive name that does not physically reside in the
10 computer system.